

Section 838—Graffiti Proof Coating for Concrete

838.1 General Description

This section includes the requirements for products that make graffiti-proof coatings and an effective graffiti removal system over specified surfaces.

838.1.01 Related References

A. Standard Specifications

Section 836—Special Surface Coating for Concrete

B. Referenced Documents

QPL 42

838.2 Materials

838.2.01 Graffiti Proof Coating

A. Requirements

1. Type

Select an approved graffiti guard from QPL 42. When using special surface coatings as base coats, ensure the special surface coatings meet Section 836 requirements and the two coatings are compatible.

2. Certification

Submit a sample and an annual warranty for evaluation each year, or whenever product formulation changes, whichever comes first.

B. Fabrication

General Provisions 101 through 150.

C. Acceptance

1. The Department will evaluate the compatibility of the graffiti-proof coating and the special surface coating as a graffiti guard system.
2. The manufacturer will submit test results from an Independent Laboratory showing that the coating meets the following requirements:
 - a. Freeze-Thaw Resistance
 - 1) No evidence of cracking or adhesive loss after 100 freeze-thaw cycles
 - 2) Easy to remove dried paint using a cleaner supplied by the producer or a commercial paint stripper
 - b. Accelerated Weathering

No evidence of cracking or adhesive loss and no discoloration after 1,500 hours of exposure in a Twin Arc Weatherometer.

D. Materials Warranty

General Provisions 101 through 150.

Section 839—Corrugated Polyethylene Underdrain Pipe

839.1 General Description

This section includes the requirements for corrugated polyethylene underdrain pipe and fittings used primarily as highway underdrain and temporary slope drains.

839.1.01 Related References

A. Standard Specifications

General Provisions 101 through 150.

B. Referenced Documents

AASHTO M 252

839.2 Materials**839.2.01 Corrugated Polyethylene Underdrain Pipe****A. Requirements**

1. Type

Use corrugated polyethylene underdrain pipe and fittings that meet the requirements of AASHTO M 252, with the following exceptions:

- A maximum elongation of 10 percent
 - A gage length to determine percent elongation of 3 ft, $\pm 1/8$ in (900 mm, ± 3 mm)
2. Obtain pipe from an approved source or follow the acceptance process described in Subsection 839.2.01.C, "Acceptance" below.
 3. Unless specified otherwise, pipe must be supplied in individual lengths not shorter than 10 ft. (3 m) Coils are not permitted for pipe 6 in (150 mm) or larger in diameter.

B. Fabrication

General Provisions 101 through 150.

C. Acceptance

1. You may use pipe in construction supplied from plants operating on certified acceptance status without prior evaluation by lots.
2. Test any approved or untested material prior to use that has been directly exposed to sunlight for more than 6 months.
3. Pipe lengths that have developed bends that cannot be sufficiently straightened will be rejected.
 - a. Straightening of individual pipe lengths by force will be permitted provided that no stress cracking occurs in the process.
 - b. Any pipe length that develops stress cracks will be rejected.
4. Certification Process
 - a. To qualify as an approved source, the manufacturer must present the following:
 - 1) Evidence that the manufacturer has an acceptable quality control procedure for raw materials and manufacturing processes
 - 2) A yearly notarized certification stating that all pipe furnished is manufactured to meet this Specification
 - b. The Department will conduct random plant inspections and take random samples at the plant or at the project site for testing.
 - c. The Department will remove plants from certified acceptance status when, at any time, they demonstrate inadequate quality control or non-compliance of the pipe material specifications.

D. Materials Warranty

1. Store and use polyethylene tubing properly. It will melt and burn when exposed to flame.
2. This product is flexible, thin-walled, and will temporarily weaken when heated. Be careful to avoid crushing or stretching the pipe on hot days with bright sunlight.

Section 840—Corrugated Aluminum Alloy Pipe

840.1 General Description

This section includes the requirements for the following types of corrugated aluminum alloy pipe:

- Culvert
- Underdrain